

secretase, as shown in FIG. 9 (top).

SEQ ID NO: 77 is a peptide fragment at the N-terminus of naturally occurring β -secretase, as shown in FIG. 9 (top).

SEQ ID NO: 78 is a P3-P4'XD \rightarrow V (VMXVAEF, where X is hydroxyethylene or statine).

SEQ ID NO: 79 is a peptide fragment of naturally occurring β -secretase, as shown in FIG. 9 (bottom).

SEQ ID NO: 80 is a nucleotide insert in vector pCF used herein.

SEQ ID NO: 81 is P4-P4'XD \rightarrow V (EVMXVAEF, where X is hydroxyethylene or statine).

SEQ ID NO: 82 is APP fragment SEVKMDAEF (P5-P4'wt).

SEQ ID NO: 83 is APP fragment SEVNLDAEF (P5-P4'sw).

SEQ ID NO: 84 is APP fragment SEVKLDAEF.

SEQ ID NO: 85 is APP fragment SEVKFDAEF.

SEQ ID NO: 86 is APP fragment SEVNFDAEF.

SEQ ID NO: 87 is APP fragment SEVKMAAEF.

SEQ ID NO: 88 is APP fragment SEVNLADEF.

SEQ ID NO: 89 is APP fragment SEVKLAAEF.

SEQ ID NO: 90 is APP fragment SEVKMLAEF.

SEQ ID NO: 91 is APP fragment SEVNLLAEF.

SEQ ID NO: 92 is APP fragment SEVKLLAEF.

SEQ ID NO: 93 is APP fragment SEVKFAAEF.

SEQ ID NO: 94 is APP fragment SEVNFAAEF.

SEQ ID NO: 95 is APP fragment SEVKFLAEF.

SEQ ID NO: 96 is APP fragment SEVNFLAEF.

SEQ ID NO: 97 is APP-derived fragment P10-P4'(D \rightarrow V): KTEEISEVNLVAEF

SEQ ID NO: 98 is a nucleic acid fragment (FIG. 9).

SEQ ID NO: 99 is the N terminal peptide sequence of β -secretase isolated from human brain, recombinant 293T cells and recombinant Cos A2 cells (Table 3).

SEQ ID NO: 100 is the N terminal peptide sequence of a form of β -secretase isolated from recombinant 293T cells.

SEQ ID NO: 101 is the N terminal peptide sequence of a form of β -secretase isolated from recombinant 293T cells.

SEQ ID NO: 102 is the N terminal peptide sequence of a form of β -secretase isolated from recombinant CosA2 cells.--

At page 24, line 15 thereof, replace the term "46-66" with the term --46-69--.

At page 24, line 18 thereof, replace the sequence "ISFAVSACHVHDEFK" with the sequence --IGFAVSACHVHDEFK--.

At page 25, in the first entry of Table 3, after the term "ETDEEPEEPGR..." insert the parenthetical term --(SEQ ID NO: 99)--.

At page 25, in the second entry of Table 3, after the term "ETDEEPEEPGR..." insert the parenthetical term --(SEQ ID NO: 99)--.

At page 25, in the third entry of Table 3, after the term "TQHGIRL(P)LR..." insert the parenthetical term --(SEQ ID NO: 100)--.

At page 25, in the fourth entry of Table 3, after the term "MVDNLRGKS..." insert the parenthetical term --(SEQ ID NO: 101)--.

At page 25, in the fifth entry of Table 3, after the term "ETDEEPEEPGR..." insert the parenthetical term --(SEQ ID NO: 99)--.

At page 25, in the sixth entry of Table 3, after the term "GSFVEMVDNL..." insert the parenthetical term --(SEQ ID NO: 102)--.

At page 32, line 24 thereof, after the word "sites", delete the colon punctuation (":") and insert in its place the term --SEQ ID NO: 80.--.

At page 32, delete lines 26-31.

At page 33, delete lines 1-2.

At page 54, after the word "fragment", delete the sequence information in the text [C.GGC.CGG.AGG.GGC.AGC.TTT.GTG].

At page 56, after line 20, insert the heading --Table 6A--.

At page 56, line 21 thereof, after the sequence ending in "CT", insert the parenthetical term --(SEQ ID NO: 20)--.

At page 56, line 22 thereof, after the sequence ending in "GA", insert the parenthetical term --(SEQ ID NO: 19)--.

At page 57, in the table heading, replace the numeral "6" with the term --6A--.

At page 63, line 22 thereof, within the parenthetical and after the text reading "...Val-Lys-Met-Asp-Ala.." insert the phrase --; SEQ ID NO: 54--.

At page 63, line 23 thereof, within the parenthetical and after the text reading "..Val-Asn-Leu-Asp-Ala.." insert the phrase --; SEQ ID NO: 51--.

At page 67, line 30 thereof, delete the asterisks [*****].

At page 70, line 30 thereof, after the term ending in "-COOH", insert the parenthetical phrase --(SEQ ID NO: 72)--.

Please add the enclosed paper copy Sequence Listing (a total of 64 pages, sequentially numbered 1-64) to the specification in accordance with 37 C.F.R. §1.821(g).

In the Claims:

✓ ✓ ✓ ✓
Please amend claims 40, 69, 79 and 94 as follows:

40. (amended) The composition of claim 39, wherein said β -secretase-cleavable fragment [is] has a sequence selected from the group consisting of SEQ ID NO: 82, SEQ ID NO: 83, SEQ ID NO: 84, SEQ ID NO: 85, SEQ ID NO: 86, SEQ ID NO: 87, SEQ ID NO: 88, SEQ ID NO: 89, SEQ ID NO: 90, SEQ ID NO: 91, SEQ ID NO: 92, SEQ ID NO: 93, SEQ ID NO: 94, SEQ ID NO: 95 and SEQ ID NO: 96 [SEVKMDAEF (P5-P4'wt), SEVNLDAEF (sw), SEVKLDAEF, SEVKFDAEF, SEVNFDAEF, SEVKMAAEF, SEVNLADEF, SEVKLADEF; SEVKMLAEF, SEVNLLAEF, SEVKLLAEF, SEVKFAAEF, SEVNFAAEF, SEVKFLAEF, and SEVNFLAEF].